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09/480,837	01/10/2000	STEPHAN GEHRING	INT-99-009	4824
44279	7590	09/12/2008		
PULSE-LINK, INC. 1969 KELLOGG AVENUE CARLSBAD, CA 92008			EXAMINER ROSE, KERRIM	
			ART UNIT	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/480,837  
Filing Date: January 10, 2000  
Appellant(s): GEHRING ET AL.

\_\_\_\_\_  
/Kerri M Rose/  
Examiner, Art Unit 2616  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 7/02/2008 appealing from the Office action mailed 12/31/2007.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

No amendment after final has been filed.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

6,275,544	Aiello	8-2001
6,347,084	Hulyalkar	2-2002

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-20 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. **The amended specification and the existing specification does not enable one skilled in the art to make and/or use the invention of an ultra wide band network using a TDMA frame format.** How does ultra wide band network enable TDMA? In other words, the specification does not describe in such a way to enable how the ultra wide band network implements the TDMA.

***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1, 9, and 20 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Regarding claims 1, 9 and 20, Under the Interim Guideline for Examination of Patent Applications for Patent Subject Matter Eligibility, the claims seek for patent protection of a

signal. Moreover, it does not appear that claims reciting a multiplicity of ultra wide band signal encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in § 101. The claims do not have a practical application by physical transformation or a practical application that produces a useful, tangible and concrete result.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 1 rejected under 35 U.S.C. 103(a) as being unpatentable over Aiello et al. (U.S. Patent No. 6,275,544) in view of Hulyalkar (U.S. Patent No. 6,347,084).

Regarding claim 1, 9 and 20, Aiello discloses in **fig. 1 and col. 7, lines 47-67** of an ultra wide band network, comprising:

a master device [**device 12a , fig. 1 and col. 5, lines 45-61**] and a plurality of slave devices [**12b and 12c, see fig. 1 and col. 5, lines 45-61**] in network communication with said master device, the communication using a Time Division Multiple Access frame comprising a multiplicity of ultra wide band signals [**the master transceiver performs data transmission between several node devices via a MAC protocol utilizing a TDMA frame definition. Under the TDMA architecture, the data transmitted as short RF pulses divided into discrete data frames; see col. 7, lines 47-67**];

a Medium Access Control layer protocol for transmission and reception of network packets [see col. 7, lines 47-67], comprising:

a Time Division Multiple Access frame definition [see fig. 3 and col. 7, lines 47-55] having a start-of-frame section [SOF, see col. 7, lines 65-67], a command section [command slot 42, see fig. 3], a data slot section containing a plurality of variable length slots [see col. 8, lines 45-59 and fig. 3], a synchronization slot [master sync code 46, see col. 8, lines 1-21 and fig. 3].

Aiello fails to disclose of a TDMA frame including a timestamp slot. Hulyalkar teaches a method of timestamp synchronization that includes a control node (master device) and a plurality of other nodes (slave devices) that are in communication with one another mediated by a MAC subsystem that uses a reservation-based TDMA protocol. Hulyalkar discloses in col. 5, lines 5-17 and col. 9, lines 41-65 and respective portion of the specification to include a control node sending a preset command to slave nodes and it presets their respective timestamp to the prescribed timestamp value. Thus, having a timeslot within a TDMA frame. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to incorporate the teachings of a timestamp timeslot within a TDMA frame as taught by Hulyalkar into Aiello invention. One is motivated as such in order to enable permit precise, deterministic scheduling with reduction in delay and processing time for a reservation-based TDMA protocol.

Regarding claim 14, Aiello discloses in col. 7, lines 47-67 and fig. 1 a computer program product [framing control function in the master transceiver device 12a] for scheduling the assignment of variable length data slots in a network system having a master device and a

plurality of slave devices in network communication with said master device the network communication using a Time Division Multiple Access frame comprising a multiplicity of ultra wide band signals **[the master transceiver performs data transmission between several node devices via a MAC protocol utilizing a TDMA frame definition. Under the TDMA architecture, the data transmitted as short RF pulses divided into discrete data frames; see col. 7, lines 47-67]**, comprising:

providing a Time Division Multiple Access frame definition comprising a synchronization slot and a data slot section having a plurality of variable-length data slots **[a Time Division Multiple Access frame definition (see fig. 3 and col. 7, lines 47-55) having a start-of-frame section (SOF, see col. 7, lines 65-67), command slot 42, see fig. 3, a data slot section containing a plurality of variable length slots (see col. 8, lines 45-59 and fig. 3)], a synchronization slot (master sync code 46, see col. 8, lines 1-21 and fig. 3)]**; and

determining a schedule time to communicate the assignment and reallocation of said variable-length data slots to each of said slave devices **[see col. 8, lines 1-21 and 45-60]**.

Aiello fails to disclose of a TDMA frame including a timestamp slot. Hulyalkar teaches a method of timestamp synchronization that includes a control node (master device) and a plurality of other nodes (slave devices) that are in communication with one another mediated by a MAC subsystem that uses a reservation-based TDMA protocol. Hulyalkar discloses in col. 5, lines 5-17 and col. 9, lines 41-65 and respective portion of the specification to include a control node sending a preset command to slave nodes and it presets their respective timestamp to the prescribed timestamp value. Thus, having a timeslot within a TDMA frame. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to incorporate

the teachings of a timestamp timeslot within a TDMA frame as taught by Hulyalkar into Aiello invention. One is motivated as such in order to enable permit precise, deterministic scheduling with reduction in delay and processing time for a reservation-based TDMA protocol.

Regarding claims 2-4, Aiello discloses in col. 7, lines 47-67 and in col. 8, lines 45-60 wherein the MAC layer protocol is configured to implement dynamic requisition, allocation, and reallocation of variable length data slots within the frame.

#### **(10) Response to Argument**

Applicant submits a Declaration under 37 CFR 1.132, by Mr. Gregg Rasor to overcome the maintained enablement rejection. Applicant argues that upon review of Application's specification, Mr. Rasor concluded that a person possessing the teachings found in Applicant's specification at the time of the claimed invention, and being of ordinary skill in the art of ultra-wideband communication, would be able to implement without undue experimentation Applicant's claimed invention. Applicant also provides exhibit A as support. While the Examiner respects the opinion of Mr. Rasor, Examiner respectfully disagrees that the Application's specification provides sufficient evidence **to make and/or use the invention of an ultra wide band network using a TDMA frame format**. While exhibit A may disclose of traces of the history of ultra-wideband from 1942 to 2000, concentrating on both RADAR and communication application, the Applicant's specification does not enable possessing sufficient evidence to make and/or use the ultra wideband network using a TDMA frame format. Thus, claims 1-20 respectfully remain rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement.

7. Applicant argues that claims 1, 9, and 20 is directed to claim a network of communication devices, which is a machine, and machines are one of the enumerated statutory invention categories defined in 35 USC 101. Applicant also argues that the “communication” is accomplished by transmission and reception among the master device and one or more slave devices and approximately 45 occurrences of the word, “communication” takes place. Examiner respectfully directs applicant to claims 1, 9, and 20, where no transmission or reception among a master device and plurality of slave devices takes place. Just by reciting the word “communication” approximately 45 times in the specification is not the basis for establishing practicality, the claim itself must be written to establish practicality. Furthermore, merely reciting a multiplicity of ultra wide band signal encoded with function descriptive matter such as a network does not fall within any of the categories of patentable subject matter set forth in the 101 Interim Guidelines for statutory subject matter. The claims do not have a practical application by physical transformation or a practical application that produces a useful, tangible and concrete result.

8. Examiner cites art is relevant and appropriately addresses all the structural elements presented. Examiner respectfully reemphasizes to the Applicant, the claimed subject matter (for example of claim 1) simply provides structure and no practical application. Thus, introducing a second reference with a missing timeslot in a TDMA frame definition is obvious in the art. Furthermore, Examiner provided a logical motivation for adding the missing timeslot, specifically; one is motivated to add the timeslot in order to enable permit precise, deterministic scheduling with reduction in delay and processing time for a reservation-based TDMA protocol.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Kerri M Rose/

Examiner, Art Unit 2616

Conferees:

/Chirag G Shah/

Supervisory Patent Examiner, Art Unit 2619

/Wellington Chin/

Quality Assurance Specialist, TC 2600